UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,746	04/16/2001	Jason M. Lee	01AB056	5649

7590 06/17/2004	**EXAMINER**
Alexander M. Gerasimow	PHAM, THOMAS K
Rockwell Automation (Allen-Bradley Co., Inc.)	

ART UNIT	PAPER NUMBER
2121	3

Alexander M. Gerasimow
Rockwell Automation (Allen-Bradley Co., Inc.)
1201 South Second Street
Milwaukee, WI 53204

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No. 09/835,746	Applicant(s) LEE ET AL.
	Examiner Thomas K Pham	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *16 April 2001*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-65* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-34 and 47-51* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☒ Claim(s) *35-46 and 52-65* are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *2*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restrictions

1.   Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I.   Claims 1-34 and 47-50, drawn to the overview of the components and connectors

           associates with a user interface for creating a function block diagram, classified in

           class 700, subclass 83.

   II.   Claims 35-46 and 62-63, drawn to the boundary of the elements and where the

           elements to be place in the user interface, classified in class 345, subclasses 781

           and 782.

   III   Claims 51-61 and 64-65, drawn to identifying, copying and deleting the block

           elements in a user interface, classified in class 345, subclasses 762, 763 and 788.

The inventions are distinct, each from the other because of the following reasons:

2.   Inventions I and II are related as combination and subcombination. Inventions in this

relationship are distinct if it can be shown that (1) the combination as claimed does not require

the particulars of the subcombination as claimed for patentability, and (2) that the

subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant

case, the combination as claimed does not require the particulars of the subcombination as

claimed because defining the components and connectors associated with the user interface does

not required a definition of the viewing boundary and location for each of the elements. The

subcombination has separate utility such as defining a viewing limits and proper borders

enclosing the block elements.

3.   Inventions I and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because defining the components and connectors associated with the user interface does not require how to identify, copy and delete a function blocks in a user interface. The subcombination has separate utility such as linking individual elements to establish the overall communication between the block elements.

4.   Inventions II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention III has separate utility such as linking individual elements to establish the overall communication between the block elements. See MPEP § 806.05(d).

5.   Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6.   During a telephone conversation with Mr. Himanshu S. Amin on 06/01/2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-34 and 47-50. Affirmation of this election must be made by applicant in replying to this Office action. Claims 35-40 and 51-65 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7.   Applicants are reminded that upon the cancellation of claims to a non-elected invention,

the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the

currently named inventors is no longer an inventor of at least one claim remaining in the

application. Any amendment of inventorship must be accompanied by a request under 37 CFR

1.48(b) and by the fee required under 37 CFR 1.17(i).

First Action on the Merits

8.   Claims 1-34 and 47-50 of U.S. Application 09/835,746 filed on 04/16/2001 are presented

for examination.

Quotations of U.S. Code Title 35

9.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim Rejections - 35 USC § 102

11.   Claims 1-3, 5, 7-14, 16-20, 22, 24-31 and 33-34 are rejected under 35 U.S.C. 102(b) as

being anticipated by U.S. Patent No. 5,971,581 ("Gretta").

Regarding claims 1 and 18

Gretta teaches a user interface for creation and editing of a function block diagram in a controller

configuration system, comprising: a function block diagram representation (col. 3 lines 40-53,

"The method comprises first scanning ... configuration for the fieldbus network"); and one of a

feedback loop indicia (fig. 5), a wire connector cross-reference indicia (col. 7 lines 20-26, "The

Foundation Fieldbus network ... devices called bridges"), a pin datatype indicia (col. 13 line 66

to col. 14 line 3, "Wire tool – the wiring tool ... a valid connection is made"), a wiring error

indicia (col. 11 lines 48-52, "the Errors tab displays ... to correct the error"), a correct wiring

indicia (col. 15 lines 45-55, "During a wiring operation ... to a highlighted connection"), a free-

form text box (col. 14 lines 18-19, "Text Editing Tool ... to the screen"), a configuration error

indicia (col. 11 lines 57-61, "When the user downloads ... to cancel the download"), a block

execution status information indicia (col. 11 lines 35-39, "The Status window contains ... the

configuration utility is taking"), and a wired block parameter indicia (col. 8 lines 38-56, "The

actual function of ... also be a trend parameter"); wherein the interface allows a user to modify

the function block diagram representation in the controller configuration system (col. 7 lines 50-

55, "The computer system 14 ... interact with the computer system 14").

Regarding claims 2 and 19

Gretta teaches the feedback loop indicia comprises a localized feedback wire indicating the

presence of a feedback loop in the function block diagram representation (col. 9 lines 8-12, "a

loop or control loop ... which creates a loop").

Regarding claims 3 and 20

Gretta teaches the wire connector cross-reference indicia provides an indication proximate a wire

connector in the function block diagram representation of a connection associated with the wire

connector (col. 15 lines 19-25, "FIGS. 18a-18c illustrate ... in FIGS. 18a-18c for convenience").

Regarding claims 5 and 22

Gretta teaches the connector cross-reference indicia provides an indication proximate a wire

connector in the function block diagram representation of a plurality of connections associated

with the wire connector (col. 15 lines 19-25, "FIGS. 18a-18c illustrate ... in FIGS. 18a-18c for

convenience").

Regarding claims 7 and 24

Gretta teaches the pin data type indicia provides an indication of whether a datatype associated

with a function block pin is one of boolean, non-boolean, or unknown in the function block

diagram representation (col. 13 line 66 to col. 14 line 3, "Wire tool – the wiring tool ... a valid

connection is made").

Regarding claims 8 and 25

Gretta teaches the wiring error indicia provides an indication that a user is attempting to make an

improper wiring connection to a function block in the function block diagram representation (col.

11 lines 46-47, "The "Errors" tab is ... the current project has").

Regarding claims 9 and 26

Gretta teaches the improper wiring connection comprises connection of a wire of a first datatype

to a pin of a second datatype, wherein the first and second datatypes are incompatible (col. 11

lines 48-49, "the Errors tab displays all recent I/O errors").

Regarding claims 10 and 27

Gretta teaches the correct wiring indicia provides an indication that a user is attempting to make

a proper wiring connection to a function block in the function block diagram representation (col.

13 lines 61-62, "OK (Errors) – Performs ... removes bad wires").

Regarding claims 11 and 28

Gretta teaches the correct wiring indicia provides an indication that a user is attempting to make

a proper wiring connection to a function block in the function block diagram representation (col.

13 lines 61-62, "OK (Errors) – Performs ... removes bad wires").

Regarding claims 12 and 29

Gretta teaches the free-form text box comprises one of text, an OLE object, a control, a faceplate,

HTML tagged text, and a link in the function block diagram representation (col. 14 lines 18-19,

"Text Editing Tool ... to the screen").

Regarding claims 13 and 30

Gretta teaches the configuration error indicia comprises an indication proximate a function block

diagram element in the function block diagram representation indicating that the function block

diagram element cannot be verified as currently configured (col. 11 lines 57-61, "When the user

downloads ... to cancel the download").

Regarding claims 14 and 31

Gretta teaches the block execution status information indicia comprises an indication of a status condition associated with a function block in the function block diagram representation (col. 11 lines 36-39, "The Status tab displays ... utility is taking").

Regarding claims 16 and 33

Gretta teaches the wired block parameter indicia comprises an indication in a properties page associated with a function block that a parameter associated with the block is wired to a value source in the function block diagram representation (col. 11 lines 7-11, "the user can optionally ... in response to user input").

Regarding claims 17 and 34

Gretta teaches the indication in the properties page provides an indication to a user that a value for the parameter may not be set manually in the user interface (col. 9 lines 4-6, "A block parameter ... as a subscribed parameter").

Regarding claim 47

Gretta teaches a user interface for creation and editing of a function block diagram in a controller configuration system, comprising: an input wire connector having an input wire name associated therewith (col. 15 lines 28-34, "First the user selects ... of the PID function block"); and an output wire connector having an output wire name associated therewith (col. 15 lines 34-38, "the OUT output of the ... input of the AO-FISHER function block"); wherein the user interface is adapted to establish an association between a first function block diagram element connected to the input wire connector and a second function block diagram element connected to the output wire connector if the input wire name and the output wire name are the same (col. 15 lines 45-55, "During a wiring operation ... to a highlighted connection").

Regarding claim 48

Gretta teaches a user may create the input wire name associated with the input wire connector

(col. 8 lines 12-16, "Devices are uniquely identified ... unique on a fieldbus network"); and

wherein the user interface is adapted to indicate to the user output wire names associated with

output wire connectors available for association with the input wire connector (col. 8 lines 57-62,

"blocks 30 are configured to ... unique on a fieldbus network"); whereby the user may select an

output wire name for use as the input wire name in order to associate the input wire connector

with a desired output wire connector (col. 15 lines 45-55, "During a wiring operation ... to a

highlighted connection").

Regarding claim 49

Gretta teaches a user may create the output wire name associated with the output wire connector

(col. 8 lines 57-62, "blocks 30 are configured to ... unique on a fieldbus network"); and wherein

the user interface is adapted to indicate to the user input wire names associated with input wire

connectors available for association with the output wire connector (col. 8 lines 12-16, "Devices

are uniquely identified ... unique on a fieldbus network"); whereby the user may select an input

wire name for use as the output wire name in order to associate the output wire connector with a

desired input wire connector (col. 15 lines 45-55, "During a wiring operation ... to a highlighted

connection").

Regarding claim 50

Gretta teaches input wire names associated with input wire connectors already associated with

another output wire connector are not indicated to the user, whereby the user is prevented from

inadvertently associating an input with more than one output (col. 15 lines 53-56, "the user is

only ... and reduces wiring errors").

Claim Rejections - 35 USC § 103

12.   Claims 4, 6, 15, 21, 23 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Gretta in view of U.S. Patent No. 6,370,569 ("Austin").

Regarding claims 4 and 21

Gretta teaches a user interface for creation and editing of a function block diagram in a controller

configuration system but does not teach the wire connector cross-reference indicia provides a

hyperlink to the connection associated with the wire connector in the function block diagram

representation. However, Austin teaches the wire connector cross-reference indicia provides a

URL to the connection associated with the wire connector in the function block diagram for the

purpose of accessing the source or target web page anywhere in the world. Therefore, it would

have been obvious to one of ordinary skill in the art at the time of the invention to incorporate

the URL of Austin with the user interface of Gretta because it would provide as a hyperlink

cross-reference for the purpose of accessing the source or target web page anywhere in the

world.

Regarding claims 6 and 23

Gretta teaches a user interface for creation and editing of a function block diagram in a controller

configuration system but does not teach the wire connector cross-reference indicia provides a

plurality of hyperlinks to the plurality of connections associated with the wire connector in the

function block diagram representation. However, Austin teaches the wire connector cross-

reference indicia provides a plurality of URLs to the plurality of connections associated with the wire connector in the function block diagram representation for the purpose of accessing the source or target web page anywhere in the world. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the URLs of Austin with the user interface of Gretta because it would provide as hyperlinks cross-reference for the purpose of accessing the sources or targets web pages anywhere in the world.

Regarding claims 15 and 32

Gretta teaches a user interface for creation and editing of a function block diagram in a controller configuration system but does not teach the block execution status information indicia comprises an indication in a properties page associated with the function block. However, Austin teaches an status property associated with the function block (col. 2 lines 48-51, "The Data Socket client ... is unconnected or connected") for the purpose of providing the state of the connection associated with the function block. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the status property of Austin with the user interface of Gretta because it would provide for the purpose of providing the state of the connection associated with the function block.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should

be directed to examiner *Thomas Pham*; whose telephone number is (703) 305-7587 and fax number is

(703) 746-8874, Monday-Thursday and every other Friday from 7:30AM- 5:00PM EST or contact

Supervisor *Mr. Anthony Knight* at *(703) 308-3179.*

Any response to this office action should be mailed to: **Director of Patents and**

Trademarks Washington, D.C. 20231, or **Hand-delivered** responses should be brought to

Crystal Park II, 2121 Crystal Drive Arlington, Virginia, (Receptionist located on the 4th

floor), or fax to the **official fax number (703) 872- 9306.**

Any inquiry of a general nature or relating to the status of this application should be directed to

the Group receptionist whose telephone number is (703) 305-3900.

Thomas Pham
Patent Examiner

June 9, 2004

Anthony Knight
Supervisory Patent Examiner
Group 3600